

ALEXANDRE CARMINOT

Engineering Student - Machine Learning - Data Science

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EDUCATION

Master of Engineering - eHealth and Machine Learning 09/2019 - Present
EPF Engineering School Paris Expected Graduation in 2025

- Engineering curriculum with a specialization in programming: integrating core engineering principles, mathematics, programming, machine learning, and AI with data science, medical technology, device design, and healthcare informatics.

Computer Science - Exchange Program 09/2024 - Present
Tianjin University

- Focus on Algorithmic programming, machine learning , computer vision, and applied data science

Intelligent Medical Engineering - Exchange Program 09/2023 - 01/2024
Tianjin University

- Specialized in Ai integration to medical fields, neurosciences, brain-computer interfaces (BCI), medical imaging , and fundamentals of medical engineering.

CERTIFICATIONS

TensorFlow developer DeepLearning.AI - Fall 2024
Deep Learning Specialization DeepLearning.AI - Fall 2024
Advanced Machine Learning on Google Cloud Google - Fall 2024
Machine Learning Specialization Stanford University - Fall 2024
Advanced Medical Neuroscience Duke University - Summer 2024

PROJECTS

Find my other Projects [here](#)

Deep Neural Network Framework - Python [\[GitHub Link\]](#) 11/2024-Present
Built a deep neural network framework from the ground up, incorporating activation functions (Sigmoid, ReLU, Swish, Softmax), dropout, and flexible hyperparameters.

- Engineered versatile configurations for multi-layer networks, efficient backpropagation, flexible loss functions (MSE, MAE, Cross-Entropy), and L1/L2 regularization.
- Enables robust performance across classification and regression tasks,

NLP Text Classifier - Python [\[GitHub Link\]](#) 09/2024
Developed a high-performance NLP model that categorizes BBC news articles into topics with 94% accuracy, enhancing automatic content analysis.

- Designed a neural network architecture utilizing LSTMs and Convolutions for effective feature learning and classification.
- Implemented data preprocessing techniques, including tokenization, padding, stemming, and TF-IDF vectorization for efficient feature extraction.
- Employed Optuna for hyperparameter tuning, optimizing dropout rate, learning rate, and batch size to improve model performance and training efficiency.

Disease Prediction Algorithm - Python [\[GitHub Link\]](#) 07/2024 - 09/2024
Developed a medical diagnostic tool that predicts 41 diseases from 131 symptoms with 96% accuracy, using a multi-layer neural network built with numpy.

- Engineered multi-layer neural network with dynamic layer configuration, dropout rate and backpropagation for maximized F1-score and minimized overfitting using numpy.
- Enhanced model robustness by benchmarking against an optuna-tuned ensemble (XGBoost, SVM & ReLU) with cross-validation (84% to 96% with the ensemble model).
- Designed a PyQt5 user-friendly UI, facilitating real-time symptom input and diagnosis.

EXPERIENCE

AI Model Review Specialist 01/2024 - Present
Outlier.AI Remote

- Assess scientific, mathematical and code reasoning in AI responses, validating complex algorithms and technical explanations to enhance model precision and reliability.

Private Tutor and Esports Coach 06/2022 - 09/2023

- Led personalized tutoring sessions in Math and Physics for 10 students, strengthening foundational skills and boosting student confidence in subject mastery.
- Customized tutoring and coaching strategies to suit individual skill levels, resulting in improved student performance

Internship 06/2022 - 9/2022
Zen2050Maintenant Paris

- Developed and orchestrated interactive exhibition stands for Zen2050's annual event, creating eco-conscious games, climate-themed art, and educational activities that engaged visitors in sustainability initiatives.

ABOUT ME

Engineering student with expertise in machine learning, deep learning frameworks, and real-time predictive modeling.

Skilled in Python, TensorFlow, and neural network development, with hands-on experience in building AI-driven solutions.

FIND ME ONLINE

 [Alexandre CARMINOT \[Link\]](#)

 [My Portfolio \[Link\]](#)
[My Projects \[Link\]](#)

 [Alexandre CARMINOT \[Link\]](#)

SKILLS

Programming

Python - C++ - Java - Docker - Git

Google Cloud - MATLAB - SQL

HTML, CSS & JavaScript

Frameworks and Libraries

TensorFlow - Keras - MNE - PyTorch

Scikit - Seaborn - SciPy - NumPy

ML/AI

Machine Learning - Deep Learning

DNN - LMM - NLP - Computer Vision

Engineering Skills

Problem Solving - Innovation - Analysis

Critical thinking - Device design

Medical engineering - Neurosciences

LANGUAGES

French Native, Voltaire Certification

English Expert, TOEIC (980/990)

Spanish Intermediate, B1

Chinese Elementary, HSK3

PASSIONS

- Martial Arts: Taekwondo (Red Belt), Judo (Brown Belt)
- Team sports: Rugby & Soccer
- Music: Piano (Playing for seven years)
- Science: Astronomy, Cosmology, Archaeology